### DOCUMENT RESUME

ED 067 337

SO 004 359

AUTHOR

Lenihan, John J.; Cronin, Francis X.

TITLE

Lowell Environmental Arts and Science Center. Summary

Report, Fiscal Year 1968.

INSTITUTION

Lowell Public Schools, Mass.

SPONS AGENCY

Department of Health, Education, and Welfare,

Washington, D.C.

PUB DATE

[69]

NOTE

32p.

EDRS PRICE

MF-\$0.65 HC-\$3.29

DESCRIPTORS

\*Conservation Education: \*Ecology: Elementary Education: \*Environmental Education: \*Field

Experience Programs; Field Instruction;

Interdisciplinary Approach; School Community Relationship: Secondary Education: \*Summative

Evaluation; Teacher Developed Materials

IDENTIFIERS

\*Elementary Secondary Education Act Title III; ESEA

Title III: LEASE Project

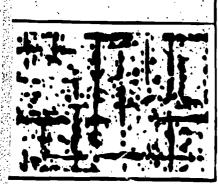
### ABSTRACT

This summary report provides a brief review and evaluation of the LEASE program's effectiveness. The purpose of the project was to plan and establish a viable program in K-12 conservation education. An interdisciplinary approach was designed, encompassing all grade levels and focusing upon field experience learning programs within the community and emphasizing study of the interrelationship of man and nature. Teacher participation was voluntary, with the site, time, and content areas determined by the teacher. Stated project objectives are measured in a summative evaluation, concluding that in 1968-1969: 1) 112 environmental learning experiences were provided with overwhelming teacher response; 2) community and regional interest was aroused; 3) teachers were involved in planning, analyzing, and evaluating curriculum; 4) students were exposed to different areas of subject matter: 5) a three-man professional staff successfully aided teachers in planning programs; 6) pre-service teachers participated in environmental experiences and training institutes conducted by LEASE; and 7) fifteen lay people were trained as field assistants to aid the classroom teachers. (SJM)

ED 06733

400

**S**A

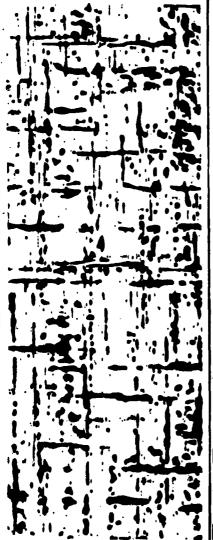


RECEIVINES AUG X7 1969 PASS.

PL 89-10

TITLE III LOWELL

environmental arts and science center



· M

PROJECT NUMBER 67 - 04414 - 0

GRANT NUMBER 0EG 3-7-704414

LOWELL PUBLIC, SEHOOLS - LOWELL, MASS.

ERIC Full Text Provided by ERIC

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM
THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATEO DO NOT NECESSARILY
REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

## LOWELL ENVIRONMENTAL ARTS AND SCIENCE CENTER

P.L. 89-10

ESEA TITLE III

PROJECT NUMBER, 67 - 04414 - 0
GRANT NUMBER 0EG 3-7-704414

SUMMARY REPORT, FISCAL YEAR 1968

Lowell Public Schools Lowell, Massachusetts 01852

Project Director Assistant Director John J. Lemhan Francis X. Cronin OE 4381 (REV 2 67)



# DEPARTMENT OF HEAL TH, EDUCATION AND WELFARE OFFICE OF EDUCATION WASHINGTON D.C. 20202

BUDGET BUREAU NO. 81-R001 APPROVAL EXPIRES 6/30/88

ESEA TITLE III STATISTICAL DATA
Elementary and Secondary Education Act of 1965 (P. L. 89.10)

RECENT

				AUG '
THIS SPACE FOR U.S.O.E. USE ONLY	PROJECT NUMBER VENDOR CODE	COUNTY CODE	REGION CODE	STATE ALLOTMENT
SECTION A - PROJECT IN FORM				<del></del>
1. REASON FOR SUBMISSION OF THE	S FORM (Check one)			S EXCEPT INITIAL
A INITIAL APPLICATION	FOR TITLE C APPLICATION CONTINUATION		PROJECT NE	N. GIVE OE ASSIGNEO IMBER
B RESUBMISSION	END OF BUDG	ET	_67	-04414-0
3. MAJOR DESCRIPTION OF PROJEC (Check one only)				
A INNOVATIVE C AD	APTIVE A PLANNING OF PROGRAM	C CONDUC	CTING ACTIVITIES E	CONSTRUCTING
B X EXEMPLARY	B PLANNING OF CONSTRUCTIO	OPERAT		REMODELING
5. PROJECT TITLE (5 Words or Less	,	<del></del>	<del></del>	
LOWELL ENV	IRONMENTAL ARTS & SCI	ENCE CENTER	1	
6. BRIEFLY SUMMARIZE THE PURP EMPHASIS AS LISTED IN SEC. 30	OSE OF THE PROPOSED PROJECT AND 3, P.L. 89-10. (See instructions)	GIVE THE ITEM NE	IMBER OF THE	AREA OF MAJOR
direct environm	a program which fost ental experience as a ium as a device for i	medium of	instruct curricul	ion, and um reform
7 NAME OF ADDITIONS (1 and 54			ITEM NUMBER	3
7. NAME OF APPLICANT (Lucal Edu. Agency)	8. ADDRESS (Number, Street	et, City, State, Zip Co	ode)	
School Department	City Hall		010:50	
Lowell, Massachuset	ts Lowell, M	assachusett		
Middlesex		TO. CONGRESSION	Fifth	
11. NAME OF PROJECT DIRECTOR	12. AOORESS (Number, Stre	et, Gity, State, Zip C	ode)	PHONENUMBER
JOHN J. LENIHAN	Lowell Environ Science Center		5 &	458-2181
	City Library B			AREA CODE
	Lowell, Massac	husetts 108	352	617
13. NAME OF PERSON ANTHORIZE				PHONE NUMBER
PECEIVE GRANT (Please type)	Superintendent	of Cohool		453-1191
WAYNE R. PETERS	City Hall	OI SCHOOLS	•	AREA CODE
	Lowell, Massac	husetts 0°	852	617
15. POSITION OF TITLE	The second of th			- <del> </del>
Superintendent o	f Schools			
SIGNAT REAF PERSON AT THORIT	ZED TO RESERVE GRANT	•		DATE SUBMITTED
A. L.	The same			9/20/69

PAGE 1

327	NA Centin T THE NUMB IGRESSIONA IVED	EN OF EAC		TAL NUMBER UNTIES SERV		1		EXPEND		F LO	R PUPIL ADA CAL EDUCA- ED
	l distr	ict		TAL NUMBER A'S SERVED	1 OF	3		s	498.3	5	
	<u> </u>	·	PO GR	TAL ESTIMATE PULATION IN APHIC AREA	SERVED -	121,14		<u> </u>			<u> </u>
<u> </u>	ON'B - TIT	LE III BUD	GET SUMM	T -	ROJECT (In					T	
				OEG	PREVIOUS RANT NUMBE		EGINNING DA		G DATE o, <i>Year!</i>	'	FUNDS REQUESTED
<b>A</b> .	Initial Appli Resubmissio		-				·			s	
в.	Application Continuation								<u> </u>	,	
c.	Application Continuation			<u> </u>			· · · · · · · · · · · · · · · · · · ·			5	
D.	Total Title	ll Funds		<u> </u>		· .		_ <del></del>		3	
	End of Budg				-7 <u>-</u> 70441		7/1/68				1,178.00
Col	mplete the facilities	following for which	items onl h Title II	y if this p I funds are	project incl requested.	'udes const Leave bl	ruction, a ank if not	cquisition, appropriat	remodel e.	ling,	or leasing
В		SQUARE FE			L SQU ARE FE				OF TITL		
<u> </u>								\ \ \			
CTI	ON C - SCI	HOOL ENR	OLLMENT,	PROJECT	PARTICIPAT	ION DATA	AND STAF	S	ENGAG	ED	
CTI	ON C - SCI	HOOL ENR	PRE- KINDER- GARTEN	PROJECT I	GRADES	GRADES 7 - 12	AND STAF	SS MEMBERS	ENGAG		BERS ENGAGIN IN-SERVICE TRAINING FO
	School Enrollment	(1) <sub>Public</sub>	PRE- KINDER-	KINDER- GARTEN	GRADES	GRADES 7 - 12				LS	BERS ENGAGIN IN-SERVICE TRAINING FO
	School Enrollment	(1)Public (2)Non- public	PRE- KINDER-	KINDER- GARTEN	GRADES 1 - 6	GRADES 7-12			TOTA	Ls 98	BERS ENGAGIN IN-SERVICE TRAINING FO
	School Enrollment in Geo- graphic Area Served	(1) <sub>Public</sub> (2) <sub>Non-</sub>	PRE- KINDER-	KINDER- GARTEN	GRADES 1-6	GRADES 7-12  9,727  3,373			22,7 6,7	Ls 98	BERS ENGAGIN IN-SERVIC TRAINING FO PROJECT
^	School Enrollment in Geo- graphic Area Served Persons Served by	(1)Public (2)Non- public (1)Public (2)Non- public	PRE- KINDER-	KINDER- GARTEN	GRADES 1-6 11.711 3,373	9,727 3,373 360			22.7 6,7	98 46	BERS ENGAGI IN IN-SERVIC TRAINING FO PROJECT
A	School Enrollment in Geo- graphic Area Served Persons Served	(1)Public (2)Non- public (1)Public (2)Non- public (3)Not Enrolled	PRE- KINDER-	KINDER- GARTEN	GRADES 1-6 11.711 3,373 360	9,727 3,373 360			22.7 6,7	98 46 20	BERS ENGAGIN IN-SERVICE TRAINING FOR PROJECT
A	School Enrollment in Geo- graphic Area Served Persons Served by	(1)Public (2)Non-public (1)Public (2)Non-public (3)Not-Enrolled (1) Public	PRE- KINDER-	KINDER- GARTEN	3,373 360	9,727 3,373 360			22.7 6,7	98 46 20	BERS ENGAGIN IN-SERVICE TRAINING FOR PROJECT
A	School Enrollment in Geo- graphic Area Served  Persons Served by Project  Additional Persons Needing	(1)Public (2)Non-public (1)Public (2)Non-public (3)Not Enrolled (1) Public (2)Non-public	PRE- KINDER-	KINDER- GARTEN	3,373 360 180	9,727 3,373 360 180			22.7 6,7 7 3	98 46 20	BERS ENGAGIN IN-SERVICE TRAINING FOR PROJECT
A	School Enrollment In Geo- graphic Area Served  Persons Served by Project	(1)Public (2)Non-public (1)Public (2)Non-public (3)Not-Enrolled (1) Public (7)Non-	PRE- KINDER-	KINDER- GARTEN	3,373 360 180	9,727 3,373 360 180			22.7 6,7 7 3	98 46 20 60	120
A B	School Enrollment in Geo- graphic Area Served  Persons Served by Project  Additional Persons Needing	(1) Public (2) Non-public (1) Public (2) Non-public (3) Not Enrolled (1) Public (2) Non-public (3) Not Enrolled ER OF	PRE- KINDER- GARTEN	KINDER-GARTEN  1,360	3,373 360 180	9,727 3,373 360 180 9,367 3,193			22,7 6,7 7 3 21,7 6,3	98 46 20 60	BERS ENGAGI IN IN-SERVIC TRAINING FO PROJECT

RUI	RAI	L/URBAN DISTRIBUTION OF		S SERVED OF RURAL	TO BE SERVE		CT DLITAN AREA	<u> </u>
		PARTICIPANTS	FARM	NON-FAR	M CENTRA	NL-C - V	NON-	OTHER URB AI
P E S E		ENT OF TOTAL NUMBER			71	.4%	. ]	28.6%
		D . PERSONNEL FOR ADMIN		IMPLEMENT	ATION OF PR	DJECT		
PΕ	RS	ONNEL PAID BY TITLE III F	UNDS			,	<u></u>	
		TYPE OF PAID PERSONNEL	REGUL	AR STAFF AS:			W STAFFHIR	Γ
		PERSONNEL	FULL-TIME	PART-TIME	FULL-TIME EQUIVALENT 3	FTIME 4	PART-TIME 5	FULL-TIM EQUIVALE 6
		MINISTRATION: ' PERVISION			2	1_	,	5
-	_	ACHER:	<u>i</u>					
L	(1)	PRE-KINDERGARTEN						
	(2)	KINDERGARTEN				·		
	( 3)	GRADES 1-6		•	2/			1
	(4)	GRADES 7-12			<u>2</u> /			5
	(5)	OTHER				2		
c.	PU	PIL PERSONNEL SERVICES	·					
D.	ОТ	HER PROFESSIONAL		1		114	25	1,
E.	AL	L NON-PROFSSIONAL			,		10	122
F.		R ALL CONSULTANTS PAID TITLE III FUNDS	(1.) TOTAL NE	Ω	<u>                                       </u>	.02 (2) TOTAL C.	AL EN DAR	<u>  133</u> 40
D F	_							
	ERSONNEL NOT PAID BY TITLE		REGULAR STAFF ASSIGNED TO PROJECT				W STAFF HIR	
		TYPE OF UNPAID PERSONNEL	FULL-TIME	PART-TIME	FULL-TIME EQUIVALENT 3		PART-TIME	FULL-TIM
A.		DMINISTRATION ? PERVISION				<b>1</b>		1.
В.	TE	ACHER:	1		1			1
	(1)	PRE-KINDERGARTEN			<u> </u>		,	
	( 2)	KIN DERGARTEN						
	(3)	GRADES 1 TO 6	30	5				
- 1	(4)	GRADES 7-12	30	5				
		OTHER						
ļ	151				1		,	
-	Ц	IPIL PERSONNEL SERVICES		,	1			
-	PL	IPIL PERSONNEL SERVICES		•		·		
C.	PL 01							,
C. D.	PU O1	HER PROFESSIONAL	(1.) TOTAL N		2	2.) TOTAL C	AL ENDAR	40

TK	ON E - NUMBER OF PERSONS SER	VED OR 1						NON PUBLIC	
	MAJOR PROGRAM OR SERVICES	PRE·K	TOTAL N	UMBER SERV	7-12			SCHOOL	ESTIMATE COST
		PRE-K	, K (2)	. (3)	7-12	ADULT (S) .	OTHER	PUPILS IN- CLUDED (7)	(4)
_	VALUATIVE PROGRAMS .			·					
	Deficiency Survey (Area Needs)	<u> </u>	<u> </u>	<b>↓</b>			ļ	<del> </del>	
В	Curriculum Requirements Study (Including Planning for Future Need)			<u> </u>	·			<u> </u>	
=	Resource Availability and Utilization Studice								
	STRUCTION AND/OR ENRICHMENT			1					
_1	Arte (Music, Theater, Graphics, Etc.)			1200	1200		ļ	900_	3/
3	Foreign Languages					) 		<u> </u>	
=	Language Arts (English Improvement)	·—		1200	1200			900	
2	Remedial Reading								
	Mathematics			1200	1200			900	
=	Science			1200	1200			900	
G	Social Studies/Humanities			1200	1200			900	
Ħ	Physical Fitness/Recreation			1200	1200			900	
'	Vacational/Industrial Arts								
j	Special-Physically Handicapped								
K	Special-Mentally Retarded								
L	Special-Disturbed (Incl. Delinquent)			25	25				
M	Special-Dropout								
N	Special-Minority Groups			60	60				Ī.
	STRUCTION ADDENDA	]			1				Ī
	Educational TV/Radio	<del> </del>	<del>                                     </del>	<del></del>	-	<del>                                     </del>	<del> </del>	<del>                                     </del>	<del> </del>
!3	Audio-Visini Aids	<u> </u>			<u> </u>			1	1
С	Demonstration Learning Centers								<u> </u>
.,	Stray Families								
·r	! PAaterial andror Cervice Centers !			1200	1200			900	1
-	Flora Processing							Î	ļ.,
-	SPSONAL SERVICES	<del>                                     </del>	+	<del></del>	<del>                                     </del>	-	1	1	<del>                                     </del>
	Medical Dental								
	Carin' Privinsing to	<b>†</b>							1
	THER	1			<del></del>				1

### Notes - TITLE III DATA FORM

- 1/ The State of Massachusetts and the City of Lowell do not keep figures on racial distribution of students. However, the general census figures for the area reveal that 99 per cent of the population is white and one per cent non-white. This should be reflected in the school population as well.
- 2/ It is difficult to assign at this time exact time blocks for specific grade levels to Center staff and we cannot accurately predict whether the substitute teachers will be supplied as five or twenty-five. Field teaching assistants will also be of varying number depending upon the time any given individual has to devote to the project. Thus our figures are arbitrary.
- Because of the multi-disciplinary nature of this project, subject matter breakdown is not feasible. Also, the project is so designed as to give classroom teachers a choice of subject area rather than arbitrarily assigning it. Likewise, cost breakdows is not possible.

OR 0882 111-66

# DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE OFFICE OF EDUCATION WASHINGTON, D.C. 20202

SUDSET SUREAU NO. ST-REDI APPROVAL EXPIRES 6-30-65

### PART II-NARRATIVE REPORT

Application	on For Continuation Grant OR
[X] End of Bu	dget Period Report
d Secondary Educat	on Act of 1965, Title III, P.L. 89-10, as amended
ect by the following:	Name and Address of Agency, Praject Number, Grant Number, State, and

- 1 (a) For operar and activities, discuss the effect of the project on the clientele by briefly stating the major objectives of the project and the techniques used in evaluating the extent to which these objectives were achieved. PACE project applicants are required to provide project evaluations. Please attach one copy of the results of this evaluation with supporting materials. Estimate the cost of the evaluation.
  - (b) For planning activities, attach one copy of the results of the planning.

Elementary on

INSTRUCTIONS . Identify this proj

Budget period (month, day, year).

- 2. Briefly describe project endeavors in which the anticipated results have exceeded expectations, and those in which results have not measured up to expectations.
- 3. Report the effect of the project on the educational institution or agency by discussing what you consider to be the greatest change resulting from the project.
- 4. Report the effect of the project on the co-operating agencies by (1) listing all the community agencies that co-operated in the project, (2) discussing the results of such co-operation; and (3) listing local aducational agencies and counties which were served by the project and indicate any changes since the initial application.
- 5. Discuss how project information was disseminated. Include such information as (1) the number of unsolicited requests for information; (2) the number of visitore from outside the project area; and (3) the estimated costs of such dissemination.
- 6. Describe the methods and procedures being developed to carry the project forward without Federal support after the designated approval period.
- 7. List costs for budget period this narrative report covers:

Massachusetts Budget Period

\$45,500	Total cost.
<b>s</b> 16,000	Total non-Federal support.
\$45,500	Total Federal support under Title III, P.L. 89-10.
\$	Total Federal support other than Title III, P.L. 89-10,
	Lowell Environmental Arts & Science Center City Hall, Lowell, Massachusetts 01852 GRANT NUMBER 0EG 3-7-704414-3945 PROJECT NUMBER 67 04414-0

July 1, 1968 -

June 30, 1969

### 1968-69 SUMMARY REPORT

In the late nineteen fifties the city of Lowell, Massachusetts, experienced a felt need to revivify and rejuvenate its socio-economic-educational opportunities. In reacting to this need, Lowell reassessed and renovated existing programs, and initiated others that were innovative and/or experimental.

In the fall of 1966 a request was made to and granted by the U.S. Office of Education for an E.S.E.A. Title III planning grant. This grant enabled Lowell to plan and establish a viable program in conservation education. In January, 1967, the LEASE program was submitted to the Office of Education, and in April of the same year the project was awarded to the Commonwealth of Massachusetts. The pilot project ran throughout the 1967-68 school year and allowed a limited number of local teachers to participate in utilizing the natural and social environment outside the classroom as an educational medium. The first operational year -- the 1968-69 school year -- provided a much larger number of teachers (three times as many) to participate in the program.

The basic concept which permeates all LEASE activities is that some unit or part of a unit in most subject areas can best be taught in an environment other than the classroom, or in the words of L.B. Sharp, "teaching outdoors those things best taught outdoors and teaching indoors those things best taught there."

The LEASE "home" site for environmental learning through the interdisciplinary approach is the 1000-acre Lowell-Dracut State Forest. Besides being easily accessible, the Forest offers a variety of terrain which lends itself to virtually all areas of the curriculum. The potential of the Forest as an educational as well as a recreational area is considerable and is now undergoing detailed study by the state Division of Forests and Parks.

Q

For all its advantages, the Forest is but one many areas suitable for environmental experiences. Accordingly, during its first operational year, LEASE provided a variety of other learning situations suitable to the interdisciplinary approach to learning that embodies the underlying concept of the program. One of these is the Audubon Drumlin Farm in Lincoln, Massachusetts. Designed especially for children in the primary grades, the facility provides the urban child with a broad view of what a farm is really like and at the same time serves to promote the cause of conservation. Another farm complex accessible to interested teachers is that operated by the State Department of Correction in Billerica.

In the area of the social sciences, the city and its environs offer myriad possibilities. Tours of selected sites in and near Lowell were arranged according to the teacher's preference. LEASE also provided for visits to municipal buildings, talks by various department officials, and mock council and school committee sessions in the council chambers.

Older pupils were provided learning experiences at historical Concord and Lexington. Now a national monument, the battleground at Concord is within easy traveling distance and provides a variety of learning opportunities.

The water treatment plants in Lowell and the neighboring towns were sites of further experiences involving classes at the junior-senior high level.

For students at the same level there were opportunities in the area of earth science at the Ipswich River Sanctuary in Topsfield with its variety of topographical features as well as an abundance of plant and animal life.

In the spring months, seashore areas provided rich learning experiences, and LEASE has scheduled a number of such visits for the school year ahead. In



June of this year the New England Aquarium in Boston opened to the general public.

LEASE is now in the process of making arrangements for programs at this site.

It is anticipated that visits to the aquarium will be among the more rewarding learning experiences available in this area.

For groups with a special interest in art, learning experiences have been provided, especially during the winter season, at the Gardner and Fine Arts Museums in Boston. Also younger groups have visited Boston's Children's Museum where the outdoor environment has been effectively brought inside. Other experiences suited to the winter months have included visits to Boston newspaper plants, the Textile museum in North Andover, and the headquarters of the North-Atlantic Region of the Internal Revenue Service in Andover, Massachusetts.

LEASE has also provided for visits to such varied places as the Saugus Iron Works, Plimoth Plantation, Sturbridge Village, and the Fruitlands Museum. It has also suggested a variety of other experiences ranging from a paper plant tour in nearby Lawrence, to a boating experience in Marblehead Harbor. In all cases the choice ultimately depends on the preference and behavioral objectives of the individual teacher.

From this brief review of LEASE-sponsored program, it can be seen that the emphasis of these learning experiences is to provide students and teachers the opportunity to study the interrelationship and interdependence of man and nature in an environment other than that of the classroom.

With the increase of federal funds for education, a plethora of innovative and/or experimental programs are in existence today. The question relative to these "new" programs is, Are they doing the job they were in-



tended to do within certain (albeit vaguely defined) limits or standards of practicality? Along with the increase of federal funds for the many and diverse new programs, there are strongly-worded inquiries emanating from the U.S. Office of Education for better evidence of program success (or lack of success). As a result there is emerging a new professional in education, the evaluator. His job differs fundamentally from that of the educational researcher usually found in educational institutions.

First of all, the evaluator tries "to devise and test some practical solution to an operating problem, while the researcher is concerned with establishing new knowledge of universal applicability." He is interested in "conditions of invited interference rather than of control." Also, the evaluator "needs to be able to refine and adjust his solutions continuously." (Egon G. Guba, "Significant Differences," Education Researcher, Vol. XX, No. 3, 1969).

Evaluation of an educational program such as LEASE has two main aspects, formative and summative. Formative evaluation is concerned with the continuous analysis of data to improve the program while it is still fluid. It is concerned with converting the initial idea into a viable operational program by the development of solutions to operating problems, for the initial idea is always far from perfect and can always be improved. However, this means that changes must be continuously made whenever the data indicates that the original program objectives are being less than perfectly met (Guba). Summative evaluation is used to appraise the completed program and for the making of decisions or value judgements concerning the acceptance or continuation of the program. While LEASE is ultimately concerned with the sum-



-5-

mative aspect of evaluation, it is now necessarily involved in formative evaluation.

Formative evaluation, as defined above, has resulted in a number of changes and/or interpretations of LEASE objectives (completely stated immediately below), e.g., in Objective Four, omitting "and give them (students) a common matrix of experience from which abstractions can be made"; in Objective Five, a different interpretation and placement of emphasis; in Objective Six, a completely different approach; and added concentration on achieving Objective Seven.

The objectives of the LEASE project are:

- 1. To test the feasibility of broad-scale use of direct environmental experience as an educational medium in the Lowell area.
- 2. To arouse community and regional interest in the development of such a center.
- 3. To involve local teachers in analyzing and evaluating their curriculum in a variety of areas through their utilization of this medium.
- 4. To provide students with a variety of direct environmental experiences that will enhance their capacities to learn.
- 5. To provide a three-man professional staff that will help students and teachers make the most of the environment outside the school building as a medium for learning and teaching.
- 6. To provide practicum experiences for pre-service teachers at Lowell State College and other nearby colleges and universities who wish to gain experience in the use of the medium.
- 7. To train a small cadre of interested citizens that can act as assistants to the classroom teachers and the Center staff in using the medium so that a small instructor-student ratio can be maintained.



LEASE is designed to cut across the various disciplines and to encompass all grade levels. In short, the direct environmental medium for learning and teaching is applicable and amenable to all grade levels, K-12, and to the interdisciplinary approach. Teacher participation in the program is voluntary; and the site, time, and content areas are left to the individual teacher's imagination and discretion whenever possible.

The criterion used to measure Objective One is the extent of teacher response from year to year as well as the number of LEASE sponsored environmental learning experiences in terms of budget restrictions and limitations due to staff size as set forth in the original proposal. The goal of LEASE during the 1967-68 pilot year was to provide thirty-six direct environmental experiences. Thirty-eight were actually taken but not without some difficulty. To begin with, teacher response did not meet expectations, and LEASE-teacher preparation, embracing suitability of content area to the environmental site, integration of classroom and environmental learning objectives, site visitations beforehand, writing and rewriting lesson plans, and providing substitute teachers, far exceeded the estimated time involvement. This year (October, 1968-June, 1969), teacher response was overwhelming to the degree that LEASE could grant not quite half of the requests submitted. Last year a total of thirty-eight experiences were provided whereas this year LEASE sponsored one hundred twelve such experiences, or almost three times as many.

In order to accomplish this number of experiences, the staff (only three people to handle such time-consuming details) has had to cut back on some requirements such as insisting on detailed teacher-prepared lesson plans and the rewriting of lesson objectives. This was done without sacrificing student-oriented needs, for it has been only through LEASE that the schools



have for the first time been able to participate in a socio-culturaleducation program of such magnitude.

From Table 1, it can be seen that there is a relatively even spread of environmental learning experiences across grade levels K-9 with a slight bi-modal peaking at levels 2 and 6 (5 and 6 trips respectively) for the pilot year, 1967-68. These two grade levels (2 and 6) account for 29% of the total number of experiences for the year. The data for the year, 1968-69, shows a bi-modal peaking at the same two grade levels, with these accounting for 33% of the total number of experiences.

Further examination of Table 1 reveals that whereas the program did not reach Grades 10, 11, and 12 last year at all, it has now provided experiences for a number of pupils at the senior high level (4.5% of the total). This indicates a partial resolvement of the scheduling and substitute problems experienced last year.

Lowell has a total of 34 schools including I senior high, I vocational high, 3 junior highs, 3 elementary-junior high mixed, and 26 elementary schools. An examination of LEASE's records reveals that 19 different schools (56%) participated in the program last year and that 28 schools (83%) participated this year. A concerted effort will be made by LEASE to involve the remaining six schools in next years program.

The purpose of Objective Two is to arouse community and regional interest in the LEASE program and as such is partly in the domain of dissemination. Therefore the criterion used to evaluate this objective is the number of people and organizations that have expressed interest in the program in one way or another.



TABLE I

COMPARISON BY GRADE LEVEL AND DIVISION OF LEASE ENVIRONMENTAL LESSONS\*

	Gre	Grade Leve	Leve]											
Divisions	ᅩ	-	2	2	4	5	9	7	8	6	10 11	1 12	Other	Total
Elementary	<u>2</u> ª	2ª 4	િટ	-1	ကျ	21	اک							. 22
(K-6)	2b	2 <sup>b</sup> 6	18	12	10	13	18							79
Junior High	ě							21	21	21			÷	9
(2-6)								8	7	10				20
Senior High														
(10-12)											2 1	2		· ъ
Others <sup>c</sup>					<b>-</b> 1	21	-1						७।	10
						-	-						9	8
TOTAL	7	4	٠١٦	-1	4	41	9	~1	2]	. 2			9	38
	2	و	18	12	10	14	19	3	7	01	2 1	2	9	112

\*Comparison of school year 1967-68 (Oct.-June) with school year 1968-69 (Oct.-June).

<sup>a</sup>Numbers underlined indicate totals for 1967-68.

<sup>b</sup>Numbers not underlined indicate totals for 1968-69

<sup>C</sup>Other category indicates ungraded classes (mentally retarded, sight saving, TESL, and private).

In the planning stage, the concept of direct environmental learning ex- v periences was well received by the community-at-large. The planners received direct and indirect offers of aid and assistance from teachers and administrators, college and university personnel, and lay individuals and organizations.

During the pilot year, LEASE prepared and mailed, upon request, abstracts of the Program to other Title III projects in Massachusetts and various other states as well as to environmentally oriented organizations throughout the country. Staff members gave illustrated talks before many diverse groups in the course of the year. Members of the staff also participated actively in the National Conference on Environment Education held in Ringwood, New Jersey, in May of 1968.

This year LEASE has received local newspaper publicity on many phases of its program, and has had radio coverage of its involvement in local and regional educational activities. Considerable state-wide publicity, by way of news releases, was also provided on the occasion of the April, 1969 conference of the Massachusetts Committee on Environmental Education, held at Northeastern University's Warren Center for Outdoor Education. During the meeting, which was attended by concerned public as well as environmental educators from all parts of the state, a presentation of the LEASE program was given by project director John J. Lenihan.

LEASE has also disseminated material throughout the various Massachusetts Title III projects by virtue of its membership in the Massachusetts Committee on Environmental Education which has as general objectives (1) the improvement of intercommunication among projects, (2) planning for effective dissemination with respect to environmental education, and (3) promotion



of mutual interests in environmental education.

On May 13 and 14, the State Department of Education and the Title III, ESEA Advisory Council in cooperation with the Massachusetts PACE Association held a Creative Education Fair in McHugh Forum at Boston College. LEASE was one of seventy-five active Title III projects that had booth space at this presentation. From its scheduled involvement in the Fair, LEASE received local and state-wide publicity.

Earlier this year, the staff prepared a manual for environmental experiences, <u>Introduction to LEASE</u>. This manual, along with an explanatory letter, was distributed to Lowell school administrators and principals and mailed to selected state and federal personnel.

In May 1968 LEASE received and responded to written communication from the Managing Editor of <u>Grade Teacher</u> stating that the magazine was preparing a major article on important science programs being developed across the country and requesting written and/or illustrative material about the program. The article entitled "Ecology" appeared in the <u>Grade Teacher</u>, Vol. 86, No. 5 January, 1969, and emphasized the interrelationship and interdependence of man and nature. Project LEASE was selected as one of the few exemplary programs cited in a list of "some of the better projects currently in operation across the country." As a result of this nation-wide publicity, LEASE was inundated with requests for written and illustrative material from individuals, school systems, colleges, and various programs across the country. These requests have now been completely filled.

In March, 1969, LEASE was interviewed via telephone by a representative of the Office of Education in Washington, D.C. concerning its environmental



program. The matter discussed in this interview, along with photographic material submitted afterward, was to be considered for inclusion in a proposed article on environmental education planned for a future edition of the official publication, American Education.

Lowell, in 1968, was designated a Model City and the section involved is known as the Model Neighborhood. Many of the children in the Acre section have had direct contact with LEASE through the six public and parochial schools that are located within the area. As a result of the impact of LEASE on these six schools (principals, teachers, students, and parents) the Model Cities project has decided to place major emphasis on environmental education during its first year action program. A big step in this direction has been the establishment of a Task Force on Basic and Adult Education whose primary purpose is to "plan and develop materials and relevant, effective curricula to encourage creative uses of the local environment for educational purposes."

The Massachusetts legislature in 1966 appropriated funds to be administered by the Department of Natural Resources to initiate cooperative planning for the educational-recreational use of the Lowell-Dracut State Forest as well as other forested areas. Since 1968, a committee composed of state legislators from the Lowell area and the Lowell city council have been actively investigating the forest potential. This committee has initiated studies to investigate soil composition, water table, access roads, and site locations. These studies are expected to be completed sometime this year. Since the forest is LEASE's "home" site, LEASE is vitally interested in the plans and activities of this committee and has established a direct communication link between the committee and LEASE, with the assumption of liaison duties by the assistant director of LEASE, Mr. Francis X. Cronin.



Company and the second of the

In learning to effectively utilize the medium of direct environmental experience, LEASE feels that the teacher will of necessity have to examine the curriculum analytically with respect to the proposed learning experience and thereby become involved in analyzing and evaluating their curriculum, which is the stated purpose of Objective Three. In exploring the potential of the environmental medium, the teacher may realize that other media might well meet some of the lesson objectives more effectively, and may begin to use a multimedia approach in attaining educational objectives rather than the textbook approach exclusively. Thus as teachers become more proficient in selecting appropriate media to meet varied instructional objectives, they may become dissatisfied with the present curriculum and become more actively and personally involved in curriculum reform and innovation. Teachers who use the multi-media approach to learning and who are actively involved in curriculum planning may also gain some insight of the spiral and interdisciplinary approach in a pupil-centered atmosphere.

During the pilot year, to reduce and hopefully to dissipate any teacher resistance, real or imagined, to the innovative nature of the project, LEASE had each participating teacher directly and actively involved in the planning, analyzing, and evaluation of the proposed environmental experience. This involvement was in terms of teacher-prepared lesson plans with the intention that the lessons would be filed for future use.

However, as teachers submitted their lesson plans, it was apparent that something had to be done about writing objectives. Since the statement of an objective is in fact an attempt at verbal communication, it is therefore of paramount importance that the words used convey the same meaning to all intended readers. This imposed on the teacher's free time because of necessary conference with LEASE staff on the relevancy of the proposed experience to the content, and on defining objectives in terms of expected behavioral changes.



LEASE attempted to solve the problem by assisting the teacher in writing or rewriting the complete lesson plan and also by writing the lesson plan in terms of what, in the opinion of the staff, the teacher had in mind.

This kind of approach during the current year was impossible due to the increased number of requests for LEASE-sponsored trips, the involvement of many more teachers, increased administrative duties of the LEASE staff, and the limitations of the staff relative to the size of the public school system (630 teachers, 15-16,000 students). Because of the time element, as an expediency, LEASE recommended that each teacher submit a written statement of objectives on a voluntary basis. However, it is expected that in the coming school year this statement will be required rather than voluntary.

The basis for the earlier change in attitude by LEASE towards this objective lies in the original proposal for the planning grant, which states on page 49, "Active involvement of classroom teachers during this initial planning period was impossible due to the limited time allotment of the planning grant..."

It is felt that if there had been enough time to directly and actively involve the classroom teacher in the planning stage they could, and in all probability, would have provided feedback to the teacher community concerning the aims and purposes of the proposed LEASE project. They would have had a part in arriving at meaningful, non-ambiguous, operationally defined statements of intended LEASE educational outcomes. This would have resulted in a nucleus of classroom teachers who thoroughly understood the objectives of the project, thereby becoming committed to the program and responding to it by developing a variety of learning experiences which would have been as diverse and as complex as dictated by the situation.



Objective Four underscores the interdisciplinary approach stressed in the 
LEASE program as well as the assumption that such subjects as history, English,
mathematics, and language arts are adaptable and amenable to direct environmental
experiences quite as well as science and conservation.

The criteria for determining the degree of achievement of this objective are the various sites visited and the interdisciplinary nature of each experience. The data gathered from the records kept by LEASE show that on one hundred twelve experiences at twenty separate sites students were exposed to nine different areas of subject matter; namely, art, biology, botany, conservation, language arts, mathematics, music, science, and social studies. Among the sites visited were the Boston Museum of Science, Drumlin Farm, the Lowell-Dracut State Forest, Lowell and Billerica water treatment plants, various city sites, e.g., fire stations, newspaper plant, municipal buildings, the post office, the historical sites of Concord and Lexington, Plimoth Plantation, and Salem, Mass. The most popular site has been the Boston Museum of Science (28 out of 112 experiences). This is explainable in that (1) the choice of site is left primarily to the teacher, (2) weather does not usually interfere because the experience is entirely indoors, (3) the various exhibits and shows relate to many subject. areas such as science (space, natural science, astronomy, chemistry, physics, biology) and social studies (dioramas of early New England industries and of other civilizations). The adaptability of this site to various content areas, therefore, is appealing to teachers from all grade levels.

LEASE's full-time staff consists of a director, an assistant director, and a teacher-naturalist, respectively, Mr. John J. Lenihan, Mr. Francis X. Cronin, and Miss Susan C. Cornick. This staff has more than thirty years of teaching experience in and out of the classroom. They also possess specialized knowledges



and skills in outdoor education in the areas of conservation, biology, botany, ornithology, language arts, mathematics and social studies.

The primary purpose of the staff is service. They are available to teachers and principals for help, aid and assistance in any or all of the various stages of planning, and in examining and explaining the possibilities that exist for the utilization of the program. This kind of service is implicit in the fifth objective.

Considering the size of the staff, and the time and personnel required to administer and execute a program of such dimensions, LEASE has been extremely successful. During the pilot year, the staff was deeply involved in the area of preparing lesson plans for each individual environmental trip. This required a great deal of time (and patience) in terms of scheduling teacher-staff conferences for lesson preparation, the writing and rewriting of behavioral objectives, and determining the relevancy of the proposed use of the medium to content area. Besides this, the staff still had to cope with the myriad administrative detials.

During the 1968-69 school year the staff decided to modify the degree of teacher involvement through lesson plan writing by placing it on a voluntary basis. The decision was a practical one based on the time required, the increased number of requests for experiences, and the size of the staff. The teacher was asked only to submit a statement of objectives after the request for an environmental experience has been affirmed. This allowed the staff the time necessary to concentrate more on the other service-oriented needs of the teacher, as arranging transportation, procuring substitutes and field assistants when necessary, screening prospective sites, giving demonstration.



lessons, as well as keeping the records up to date and handling the considerable correspondence related to dissemination activities.

One of the needs in Lowell is for closer liaison between the academic community and the school system. Another is the preparation of pre-service teachers in the use of the environmental medium, particularly and uniquely so in Lowell, if LEASE is to become an integral part of the school structure. Objective Six is designed to meet the existing need.

In the pilot year the relationship between the pre-service teachers at Lowell State College and LEASE was mutually beneficial. Lowell State students, all of whom were enrolled in Dr. Marie Garrity's Outdoor Education course, participated in environmental experiences and in two week-long training institutes conducted by LEASE. This year Dr. Garrity is no longer on the faculty of Lowell State, and the Outdoor Education course has been dropped from the curriculum. Despite this loss, LEASE held a training program for a selected group of Lowell State juniors during the week of June 1, with gratifying results. Purposely limited to eight, the group took an active part in the regularly scheduled LEASE program for the week. Their enthusiasm and response during the training period and in subsequent letters of appreciation were an inspiration to the staff. LEASE is indebted to Dr. Margaret Shannon of Lowell State and to Dr. Garrity whose cooperation helped make the program the success that it was.

Environmental Teaching Assistants (ETA) or Aides are people trained in the elementary use of the medium so as to be of help to the staff and/or the classroom teacher on environmental experiences. These people are to be recruited from interested and capable citizens within the Lowell area. The assumption is that in any community there exists a number of people who would



be willing and eager to work part-time as instructional aides. Some may be hobbyists willing to learn to use their particular skills to fit into the instructional program of the teacher; others may come from the ranks of retired or part-time teachers professionally interested in the use of the medium.

During the pilot year this objective was not achieved. For while it may be true that these kinds of people do exist in Lowell, LEASE did not then have sufficient time nor staff to recruit and train assistants. LEASE did hold a number of meetings with local organizations, particularly the Lowell Federation of Civic Organizations on Education (LFCOE), for the purpose of recruiting qualified volunteers as field assistants.

This year LEASE has had success within the scope of Objective Seven with the volunteering of fifteen lay people as field assistants. During the month of October, 1968, a general training workshop was held for these volunteers by the LEASE staff. Since the training sessions, these people have been used where and when they were needed and available.



OE 4351 (REV. 12/66)

# DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE OFFICE OF EDUCATION WASHINGTON, D.C. 20202

# PROPOSED BUDGET SUMMARY/EXPENDITURE REPORT OF FEDER

Title III, Elementary and Secondary Education Act of 1965 - Supplementary Centers a

1E	AND ADDRESS OF AGENC	<del>Y</del>				PROJECT NUMBER GRANT NUMBER	1
•	School Departm	nent.	, City Hall.	Lowell, Mass	achusetts	67-04414-0 OEG	3-7 <i>-</i> 7
	I - EXPENDITURES (or				(Check One) PRO		STIMATE
E	XPENDITURE ACCOUN	TS			EXPEN	SE CLASSIFICATION	
	FUNCTIONAL	ACCIT	SALA	ARIES	CONTRACTED	MATERIALS TRAVEL	
	CLASSIFICATION	ACC'T	PROFESSIONAL	NON-PROFESSIONAL	SERVICES	SUPPLIES	'
_	1	2	3	4 .	5	6 7	.5
1	ADMINISTRATION	100	6,300.00	5,500.00	\$ 2,200.00	\$ 1,000.00 \$ 300.00	•
Į,	INSTRUCTION	200	23,300.00	1,640.00	1,738.00	500.00 1,200.00	
Ţ	ATTENDANCE SERVICES	300					
1	HEALTH SERVICES	400		·			
	PUPIL TRANSPORTATION SERVICES	500			6,000,00		
,	OPERATION OF PLANT	600	·				
,	MAINTENANCE OF PLANT	700					
F	FIXED CHARGES	800	600.00	- DEC	EIVAB		100, 140 100, 140 100, 140
, T,	FOOD SERVICES	900		N'DPS	IC/GWI		(A 4) (A 2)
	STUDENT-BODY ACTIVITIES	1000		V/	1627 1969		
1	COMMUNITY SERVICES	1100		<del></del>			
! ]·	REMODELING (IF COSTS TOTAL MORE THAN \$2000 ENTER IN PART II)	1220c					
	CAPITAL OUTLAY (EQUIPMENT ONLY)	1230	,	_ <del></del>			
1	TOTAL	L->	30,200,00	5 7,140.00	\$ 9,438.00	1,500.00 \$ 1,500.00	\$
<del> </del>	NEGOTIATED BUDGET		30,200.00	5 7,140.00	9,438.00		5



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE OFFICE OF EDUCATION WASHINGTON, D.C. 20202

6 'OGET BUREAU NO. 51-R570,1 APPROVAL EXPIRES 6/30/68

# BUDGET SUMMARY/EXPENDITURE REPORT OF FEDERAL FUNDS and Secondary Education Act of 1965 - Supplementary Centers and Services Program

PROJECT NUMBER	GRANT NUMBER			STATE	STATE			
67-04414-0	OEG 3	-7-704414-394	5	Massachús	setts			
	RY , ES			BUDGET PERIOD MONTH,	DAY, & YEAR			
		NAL EXPENDITURE REP	PORT	BEG: 7/1/68	END: 6/30/69			
MATERIALS AND SUPPLIES	TRAVEL	EQUIPMENT	OTHER EXPENSES	TOTAL EXPENDITURES	NEGOTIATED Budget			
6	7	8	9	10	11			
1,000.00	s 300.00		s	15,300.00	\$ 15,400.00			
500.00	1,200.00			28,378.00	29,178.00			
				6,000.00	6,000.00			
		* * * * * * * * * * * * * * * * * * * *		600.00	600.00			
			ļ		<b> </b>			
1	L							
1,500.00	s 1,500.00	S	•	\$ 49,778.00	5			
1,500.00	\$ 2,400.00	\$	5	XXXXXXXXXXXX	51,178.00			
	67-0414-0 POSED BUDGET SUMMA H DETAIL SCHEOULES) E CLASSIFIC MATERIALS AND SUPPLIES 6 \$ 1,000.00 500.00	67-04414-0 OEG 3 POSED BUDGET SUMMARY H DETAIL SCHEOULES)  E CLASSIFICATION  MATERIALS AND SUPPLIES  6 7 \$ 1,000.00 \$ 300.00  500.00 1,200.00	67-04414-0  POSED BUDGET SUMMARY H DETAIL SCHEOULES)  E CLASSIFICATION  MATERIALS AND SUPPLIES  6 7 8  \$ 1,000.00 \$ 300.00 \$  500.00 1,200.00 \$  \$ 1,500.00 \$ 1,500.00 \$	67-04414-0   OEG 3-7-704414-3945	67-04414-0   OEG 3-7-704414-3945   Massachus			



===	r 11	- CONSTRUCTION EXPEN	DITURES			PA	RT II	II - SUMMARY - AUTHORIZAT
(Ghec		ne) OSED BUDGET SUMMARY	· ·	BUDGET PERIOD (Month	, Day, & Year)	H		PERIOD (Month, Day, and Year)
		NATED EXPENDITURE REPORT	₹Т	€NDING:				ITEMS
	ÉXP	ENDITURE ACCOUNTS	ACC'T NUMBER	AMOUNT	NEGOTIATED BUDGET	1		1 OUNT AUTHORIZED FOR EXPEND DGET PERIOD SHOWN ABOVE
,	SIT	ES .	2	3	4 - Acide (Acide) - Calabert (Acide)		^	UNEXPENDED FUNDS FROM GR. AWARDED FOR PRIOR BUDGET PERIOD
	+	PROFESSIONAL SERVICES	12100	\$	s		В	APPROVED GRANT AWARD FOR BUDGET PERIOD SHOWN ABOVE
2	. 4	IMPROVEMENT TO SITES	12100,				С	TOTAL FUNDS AUTHORIZED FO BUDGET PERIOD ABOVE (SAME AS ITEM I, COL. 4)
	^	PROFESSIONAL SERVICES	12200			2	EX SH	PENDITURES DURING BUDGET F
	B C	NEW BUILDINGS AND BUILDING ADDITIONS REMODELING (1F \$2,000 OR LESS ENTER IN PART I)	1220 <b>b</b>			3	FO	(EXPENDED BALANCE OF FUNDS OR EXPENDITURE DURING BUDGE BOVE (ITEM 1 MINUS ITEM 2)
. 3	1	MINISTRATIVE EXPENSES-	1220			<b>.</b>	ART	IV - CUMULATIVE TOTALS .
	^			•			GF	ITEMS RANT AWARDS\$ 69,764.00
	Ð				·	<u> </u>  -	C/	ASH RECEIVED 59.756.00
. 4	LE	ASING OF FACILITIES	1			^^	ICLU	FISCAL REPORT IS CORRECT IDED HEREIN ARE DEEMED P
5		TOTA	<u> </u>	<u> </u>	\$	7	O TH	E GRANT AWARD.

•	ACC 0011	TING DATA						
I	TRANS.	205 255	OBLIGATION			OBJECT		PROGR
	CODE	DOC. REF.	NUMBER	FY	UNIFORM ACCT'NG NO.		F XP. CLASS	BAL. PA
	1	2	3	4	5	6 -	,	8
		<u> </u>					•	

GEO. CODE	GOVT./ NON-GOVT.	VENDOR NUMBER	AMOUNT	*n,**M	G 45.1	FA!
13	14	15	16	1.4	13	
	,			·	•	
			_	ļ		



BUDGET PERIOD (Month, Day, and Year)  ESTIMATED EXPENDITURE REPORT  BESINNING: JULY 1, 1968 ENDING: JUNE 30, 1969 FINAL EXPENDITURE REPORT								
		SINI	NING: July 1, 1968ENDING: June 30,	PART I - EXPENDI- TURES OTHER THAN CONSTRUCTION	TOTAL			
1			1	2	PART II CONSTRUCTION EXPENDITURES 3	. 4		
	1		OUNT AUTHORIZED FOR EXPENDITURE FOR GET PERIOD SHOWN ABOVE	\$51,178.00		\$51,178.	00	
		^	WNEXPENDED FUNDS FROM GRANT AWARDED FOR PRIOR BUDGET PERIOD \$ 9,727.6	0				
-		В	APPROVED GRANT AWARD FOR BUDGET PERIOD SHOWN ABOVE \$51,178.0	0				
		TOTAL FUNDS AUTHORIZED FOR BUDGET PERIOD ABOVE (SAME AS ITEM 1, COL. 4) \$51,178.		0				
$-\parallel$	2		PENDITURES DURING BUDGET PERIOD	\$49,778.00		\$49,778.00		
	3	FO	EXPENDED BALANCE OF FUNDS AUTHORIZED R EXPENDITURE DURING BUDGET PERIOD SHOWN DVE (ITEM 1 MINUS ITEM 2)	\$ 1,400.00		\$ 1,400.	00	
	PA	RTI	V - CUMULATIVE TOTALS - GRANT AWARDS AN	ID CASH RECEIVED SINC	E INCEPTION OF PRO	JECT	<del>_</del>	
7			ITEMS	CUMULATIVE TOTAL TO DATE				
41	1	GR	ANT AWARDS\$69,764.00 \$51,178.00	\$120,942.00				
ľ	2	CA	SH RECEIVED 59 756.00 51 178.00	\$110.934.00				
7	TH	S F	SCAL REPORT IS CORRECT AND THE EXPENDI		ROJECT FISCAL OFFICE	R	DATE	
-	1		DED HEREIN ARE DEEMED PROPERLY CHARGE. E GRANT AWARD.	ABLE SIGNATURE OF P	ROJECT DIRECTOR	<del>,                                     </del>	DATE	
F	OR	OFF	ICE OF EDUCATION USE ONLY	- Jane	young	an_	18/20/6	
T*N	1G N	<b>.</b>	OBJECT PROGRAM CODES  CLASS EXP. CLASS BAL. PAY SEC. RI	VOUCHER NUMBER	SCHEDULE NUMBER	]		
			6 7 8 9 10		12	]		
						]		
нT			TRISYM LINE AP	PROPRIATION SYMBOL		]		
	-		17 18 19	20	2.	· <del> </del>		
				**	• •	. 1		

PART III - SUMMARY - AUTHORIZATIONS, EXPENDITURES, AND BALANCES OF TITLE III ESEA FUNDS



Expenditure Account do. 100

Expense Class	Habie and Title, Purpose or Item	Full	Part Time	Quantity	Salary Rental or Unit Cost	Expended Amount
Salaries Professional	ct D	×		—	12,600.00	6,300.00
Non-Profes- sional	Secretary	×		-	5,500.00	5,500.00
Materials and Supplies	Business envelopes  Postage  *Postage Bond Typing paper Carbon paper Onion skin paper Yellow paper pads *35mm Color film & development *35mm B x W film, develop & print					
*For Dissemina- tion activities						1,000.00
Contractual Services	Newsletter Boston College for evaluation service					200.00
Travel	Local travel and *conference attendance		•		-	300.00
	TOTAL BUDGETED AMOUNT TOTAL EXPENDED AMOUNT		   		-	15,400.00 15,300.00

Expenditure Account No. 200

	<del></del>				· · · · · · · · · · · · · · · · · · ·			<u> </u>
Expend <b>e</b> d Amount	6,300.00	11,000.00	1,640.00	500.00	1,238.00	1,200,00	29,178.00 27,878.00	
Salary Rental or Unit Cost	12,600	11,000 6,000	2.00/hr.	4.50 1.40 4.50/qr. 1.50	15.00 class appr.			
Quantity	<b>-</b>	·		60 bxs. 300 rms. 750 225 rms.				
Part Time			×			,		
Full	× ,•	××				·		
Name and Title, Purpose or Item	Project Director, 50% time, instr	Assistant Director Teacher-Naturalist	Field Assistants 210 man days averaging 4 hrs./man-day	Ditto masters Ditto paper Mimeograph stencils Mimeograph paper Contigency fund for misc. office supplies such as pencils, staples, scissors, etc.	9 Programs at Mass. Audubon's Drumlin Farm, Admissions and Consultants	Visits to schools, field trip to sites, etc.	TOTAL BUDGETED AMOUNT TOTAL EXPENDED AMOUNT	
Expense Class	Salaries Professional		Non-Professional	Materials and Supplies	Contract Services	Travel		



Expenditure Account No. 500 - Pupil Transportation Service

	ing of buses for field trips waiting time of drivers	BUDGETED AMOUNT \$6,000.00 EXPENDED AMOUNT 6,000.00
Expense Class Hame and Title, Purpose or Item	10.10	TOTAL F

# Expenditure Account No. 800 - Fixed Charges

<u>.                                    </u>		1
Expended Amount	00.009 \$	\$ 600.00 600.00
Name and Title, Purpose or Item	Social Security and Workman's Compensation	TOTAL BUDGETED ÄMOUNT TOTAL EXPENDED AMOUNT
Expense Class	Salaries Professional	